Coordinated Federal-State Work Plan on California Water Issues

Twelve-Month Action Plan Outline

1. **Bay Delta Conservation Plan**
   - A. Complete public draft of Bay Delta Conservation Plan in fall 2010
   - B. Develop draft EIR/S for Bay Delta Conservation Plan in late 2010

2. **Drought Response**
   - A. Complete environmental documents, implement 2010 Water Transfers Program and proceed with work on long term transfers program
   - B. Coordinate state and federal financial programs for drought emergency response activities in 2010 and other regional water management projects to improve water supply reliability.

3. **Coordinate Work on State and Federal Delta Monitoring and Research Facilities and Activities**
   - A. Prepare plan, begin design and sign funding agreements for construction, operation and maintenance of Interagency Ecological Program's Rio Vista Estuarine Research Station
   - B. Secure federal funding and begin planning for U. S. Fish and Wildlife Service Rio Vista Aquatic Species Technical Center

4. **Water Project Operations**
   - A. Exercise flexibility in complying with the Delta smelt and salmon Biological Opinions to address critical water supply implications in 2010.
   - B. Provide scientific information for National Academy of Sciences Review of smelt and salmon biological opinions
   - C. Expedite Permitting and Construction of the Delta-Mendota and California Aqueduct Intertie Project
   - D. Accelerate field study of a Potential Smelt-Turbidity Relationship
   - E. 2-Gates Fish Protection Demonstration Project

5. **Habitat Restoration**
   - A. Complete Project Management Plan and execute Feasibility Cost Share Agreement for North Delta Flood Control and Ecosystem Restoration Project
   - B. Complete Final EIR and begin Importation of fill for Dutch Slough Tidal Marsh Restoration

6. **Water Quality Investigations and Implementation**
   - A. Complete Strategy for Comprehensive Delta Monitoring Program
   - B. Evaluate effects of Ammonia on species of concern in the Delta
   - C. Develop better understanding of Blue-Green Algae Effects in the Delta and Throughout the State

D. Continue Central Valley Salinity Alternatives for Long-Term Sustainability Effort
E. Complete Sediment Quality Objectives for Enclosed Bays and Estuaries
F. Complete Once-Through Cooling Policy for Power Plants
G. Develop Whole Effluent Toxicity Standards
H. Complete Drinking Water Policy for the Central Valley
I. Characterize Discharges from Bay Delta Islands, Complete and Implement Delta Pesticide Regulations, and Continue Agency Cooperation on In-Delta Pesticide Use
J. Complete North San Francisco Bay Selenium TMDL and Selenium Screening Study for the Delta
K. Update and Implement San Joaquin River Salt and Boron TMDL
L. Complete the Review and Update of the Southern Delta Salinity Objectives

7. **Flow and Water Use Investigations and Implementation**
   A. Complete Review and Update of the San Joaquin River Flow and Southern Delta Salinity Objectives
   B. Develop Flow Criteria for the Delta
   C. Investigate and Take Enforcement Against Illegal Diversions in the Delta
   D. Develop Schedule and Cost Estimates for completing in-stream flow studies for the Delta and other streams
   E. Develop procedures for a Delta Watermaster

Twelve-Month Action Plan

1. Bay Delta Conservation Plan *(To be updated by appropriate agencies)*

A. Action: Complete Public Draft of Bay Delta Conservation Plan (BDCP) in 2010

The BDCP is being developed under the Federal Endangered Species Act (ESA) and the California Natural Community Conservation Planning Act (NCCPA) to restore habitat for Delta fisheries and improve the overall ecological health of the Delta. The development of the public draft of the Plan in 2010 with state and federal agency support, pending NEPA/CEQA review and final regulatory action by the federal fishery agencies, is key to addressing the Bay/Delta fishery and water supply reliability issues in a comprehensive manner.

Key Dates:

- January 2010 – Agreement on water operations criteria for conservation plan and all major aspects of BDCP
- February 2010 *(confirm date)* - Determine habitat acreage necessary to achieve program goals and requirements
- February 2010 *(confirm date)* – Indentify conveyance option to achieve program goals and requirements
- July 2010 – Complete endangered species effects analysis
- September 2010 – Complete public draft BDCP document

B. Action: Develop Draft EIR/S for Bay Delta Conservation Plan in late 2010

Under Section 10 of the ESA, an EIS is needed before a Habitat Conservation Plan (HCP) can be issued. Similarly, the State Natural Community Conservation Plan (NCCP) Act requires an EIR. A public draft of a Joint EIR/S that contains the proposed project is needed before a final EIR/S can be issued. This public draft of the BDCP EIR/S is needed after the public draft of the BDCP is available to address a full range of impact issues of the entire plan that are not required to be addressed in the BDCP documents.

Key Dates: *(DWR, Resources Agency to Update)*
The EIR/S analysis of the proposed BDCP project can begin in earnest once the long-term and near-term operational issues and habitat acreages are finalized in early 2010.

2. Drought Response *(To be updated by appropriate agencies)*

A. Action: Complete environmental documents and implement 2010 Water Transfers Program

Background: DWR is partnering with Reclamation to implement a 2010 water transfers program and establish a long-term transfers program. Environmental

compliance is needed for the 2010 program, and preparation of a joint Environmental Impact Report/Statement is planned for a long-term water transfers program. Key tasks include:

- Facilitate 2010 water transfers and establish the long term water transfers program
- Establish DWR Office of Water Transfers
- Contract prepared for consultant to prepare environmental documents
- Funding identified to support preparation of environmental documents

Key Dates:
- Environmental compliance for 2010 program to be completed by ____
- Office of Water Transfers to be fully staffed by ___ 2010.

B. Action: Coordinate State and Federal Financial Programs for Drought Emergency Response activities in 2010 and other regional water management projects

Agencies must coordinate state and federal financial incentive programs to ensure that recipients meet consistent performance requirements, avoid double-funding of projects, and ensure that high priority projects are funded. The financial assistance programs to be coordinated include but are not limited to: CVP Recovery Act, Water Conservation ARRA, State drought assistance, State IRWM, State local groundwater assistance.

Key Dates:

3. Accelerate Construction and Upgrade of Facilities to Restore Delta Smelt and Other Native Aquatic Species *(To be updated by appropriate agencies)*

A. Improved Coordination of State and Federal Delta Monitoring and Research Activities:

1. Action: Interagency Ecological Program's Rio Vista Estuarine Research Station

Needed facilities are being developed to consolidate ongoing Interagency Ecological Program (IEP) Delta fish and water quality monitoring and research. The IEP has successfully coordinated the monitoring and research efforts of 9 state and federal agencies in the Delta since the 1960s. The IEP efforts collectively total almost $30 million per year. The purposes of the consolidation include the improvement of the coordination of monitoring and research among these participating agencies, and the improvement of the efficiency of those monitoring and research activities, by sharing facilities, equipment, boats and repair facilities. Staff and facilities are currently scattered throughout the Delta area. Among other things this facility will provide office and laboratory space; boat docking, storage and repair facilities; and equipment storage, fabrication and repair facilities.

Key Dates: During the next 12-14 months the agencies will: (1) work with the City of Rio Vista and the California Department of General Services prepare an overall plan for the 30-acre parcel; (2) begin the design of the specific IEP research facilities on about 10 of those acres; (3) sign agreements to clarify funding arrangements for the construction, operation and maintenance of the facilities; and (4) develop written policies and procedures to guide the joint multi-agency use of the facility.

2. Action: U. S. Fish and Wildlife Service Rio Vista Aquatic Species Technical Center

The U. S. Fish and Wildlife Service is considering the construction and operation of a permanent Delta native fish refuge and research facility at the city of Rio Vista as part of their Aquatic Technical Center program. The proposed facility would be an expansion and permanent funding source for the current near-term Delta Smelt refugia program conducted by the University of California at the SWP facilities at the Skinner fish facility in the Southern Delta. This facility will be adjacent to the IEP's Research Station discussed above, which will facilitate the coordination of their science activities and programs.

Timing of Steps Toward Completion and Expected Completion Date: During the next 12-14 months the USFWS will: (1) seek federal funding for the Aquatic Species Technical Center for California; (2) coordinate with the IEP planning area to prepare the overall site plan for the 30 acre parcel at Rio Vista; and (3) begin the specific planning for the Technical Center's facilities which will be situated within a portion of those 30 acres. Estimated timeframe for the project is 3-5 years.

4. Water Project Operations *(To be updated by appropriate agencies)*

A. Action: Exercise available flexibility in complying with the Delta smelt and salmon Biological Opinions to address critical water supply implications

Agencies need to evaluate and, as appropriate, make changes in the implementation of four provisions of the existing Biological Opinions that meet the objectives but have substantially less water supply impacts. These include (1) Old and Middle River flows within the range of the biological opinions with the real time flows based on the use of better models, (2) San Joaquin River Inflow to Export ratio adjusted in real time to evaluate benefits on the non-physical barrier plus predator removal in salmon survival, (3) review of new information on the most cost effective means to improve useful Delta smelt habitat with food resources leading to changes in the fall X2 as provided for in the biological opinion, (4) reasonable actions if the Delta smelt take levels are exceeded.

Key Dates:

- Mid-January 2010 – Develop an understanding between the five agencies on how exceedances of the take levels of the Delta Smelt BiOp will be handled.

- End of January 2010 – Review of the SJR I/E ratio and non-physical barrier plus predator control to allow flexible implementation by April 1, 2010. The review should be made available to the NAS review panel.

- Mid-March 2010 – Review existing information on useful Delta smelt habitat and develop a cost effective method of developing this habitat over the next 10 years consistent with the Delta smelt Biological Opinion that leads to adjustment in the Fall X2 provisions as provided in the BiOps.

B. Action: Expedite Permitting and Construction of the Delta-Mendota and California Aqueduct Intertie Project

As proposed, the Intertie would further the Federal-State partnership in water operations by connecting the Delta-Mendota Canal (DMC) and the California Aqueduct via a new pipeline and pumping plant. This action would address DMC conveyance conditions that presently restrict full use of the Jones Pumping Plant, which is the primary Federal water delivery facility that provides water to CVP contractors south of the Bay-Delta.

The Intertie will allow for maintenance and repair activities that are less disruptive to water deliveries, provide the flexibility to respond to CVP and SWP emergencies, and potentially restore as much as 35,000 acre-feet of average annual supply to the CVP.

Key Dates:
- The Record of Decision (ROD) for the Intertie will be signed December 29, 2009.
- Construction will likely commence in June 2010 and be completed by _____.

C. Action: National Academy of Sciences Review of smelt and salmon biological opinions

DOI and the Department of Commerce are sponsoring a scientific review that is being conducted by the National Academy of Sciences (NAS). NAS will provide an independent scientific evaluation of the relationship between Bay-Delta endangered species and water supply from the Delta.

The first phase of the review will explore the potential for scientifically supportable alternatives that would lessen impacts to water supply while providing a level of protection to relevant fish species and their designated critical habitats equal to or greater than the protection currently provided.

In the second phase, a longer term NAS study will be conducted on how to most effectively incorporate science and adaptive management concepts into holistic programs for management and restoration of the Bay-Delta.

Timing of Steps Toward Completion and Expected Completion Date:
- The first public meetings will be held in late January at the University of California, Davis.

- The analysis is expected by March 15, 2010.
- The long term study is expected to begin____.

D. Action: Accelerated Field Study of a Potential Smelt-Turbidity Relationship

The Delta smelt Biological Opinion issued by FWS contains provisions prescribing a range of flow limitations that affect water exports from the Delta pumps. The flow limitations and levels at which the pumps may operate are to be determined by the interagency Smelt Working Group in consideration of hydrologic conditions and potential entrainment of the species at the pumps. USGS scientists, working together with other Federal and State agency scientists and independent scientists from UC Davis, have been working intensively over the last few months to implement a new project that will gather field-based data to evaluate a potential relationship between delta smelt and turbidity. The first phase of the project has been implemented and included the installation of 14 real-time turbidity sensors in the Delta. These sensors now record and feed real-time turbidity measurements into a central location where they can be accessed for use in connection with water supply decision-making.

In the second phase of the study, USGS and partners will coordinate and oversee a pilot smelt sampling project before, during, and after major turbidity events that will help provide information on the location of Delta smelt, the relationship between smelt and turbidity, and other factors relevant to smelt location, behavior, and movement. If the results of this USGS-coordinated project demonstrate that smelt tend to move with turbid waters, this new information could inform decision-making regarding allowable pumping during periods when the newly-installed sensors indicate that turbid waters will not be drawn into the pumps. The project results also may provide information about whether it would be a cost-effective strategy to install physical gates to attempt to diminish the interaction between turbid waters and the pumps and, if so, what the optimal location of such gates might be.

Key Dates:
To be completed by appropriate agency

E. Action: 2-Gates Fish Protection Demonstration Project

In an effort to better inform water supply decisions and improve water operations, Federal agencies have been pursuing a demonstration project related to the movement of delta smelt. This project was proposed as a scientific experiment to test the hypotheses that delta smelt follow turbidity and that smelt entrainment at the pumps could be prevented by keeping turbid water away from the pumps. The project called for the mounting of gate structures on barges and then the installation of such structures at Old River and Connection Slough. Once in place, the gates would be operated to reduce turbidity near the State and Federal pumps, and an evaluation could then be made of whether turbidity is, in fact, an accurate predictor of the presence of smelt. If such a correlation were

established, the new information potentially could be used to allow for higher pumping levels during periods of clear water near the pumps. .

Federal agencies have undertaken intensive review and permitting efforts on this project in recent months. As the reviews have proceeded, it has become clear that the project purpose could most expeditiously be advanced by first proving (or disproving) the underlying hypothesis that must be established for the 2-Gates project to be effective as a potential water supply enhancement. Indeed, if the hypothesis that smelt move with turbid waters can be demonstrated in the field, it may be possible to adjust pumping rates without the physical installation of the gates (for example, by increasing pumping rates during clear water periods).

Key Dates:
To be completed by appropriate agency

5. Habitat Restoration *(To be updated by appropriate agencies)*

A. Action: The North Delta Flood Control and Ecosystem Restoration Project

DWR is pursuing the development of the project to achieve flood control and ecosystem restoration benefits in the North Delta, as well as additional benefits such as recreation improvements where practicable. In broad terms, the project is intended to meet equal flood control and ecosystem restoration purposes and objectives by minimizing the surge effect across McCormack-Williamson Tract and providing additional capacity in the project area to minimize the potential for catastrophic flooding, while substantially increasing opportunities for habitat and ecological processes.

Funding is available for completion of the Final EIR document, but not for the implementation of the project. DWR staff and TNC are coordinating with the USACE through the CALFED Levee Stability Program, to potentially fund and implement the Group 1 actions on McCormack-Williamson Tract. Additional financial assistance will be needed to provide a cost match for the USACE federal funds, and to implement the remaining Group 1 actions proposed on Grizzly Slough.

Key Dates:
- Final EIR with Preferred Alternatives – Winter 2010
- Design Complete – Summer 2010
- Construction Complete – Summer 2013

USACE is in the process of completing the study phase of the McCormack-Williamson Tract component of North Delta Project, partnering with DWR and TNC (local sponsor). The major steps of this phase are the following:

- Complete a reconnaissance level study to be used as preliminary draft Project Implementation Report – January 2010
- Complete the Project Management Plan (PMP) which will lay out the scope, schedule, and budget to complete the PIR – February 2010

- Execute the Feasibility Cost Share Agreement (FCSA) which is essentially the contract between the Corps and the project sponsor – March 2010

B. Action: Dutch Slough Tidal Marsh Restoration

Restoration of tidal marsh in the Delta is considered a priority by all Delta planning efforts (for example, BDCP, Delta Vision). Dutch Slough is one of the few properties owned by the state with elevations suitable for tidal marsh restoration. A draft Conceptual Plan was completed in 2006 and the Draft EIR released in 2008.

Restoration of tidal marsh and associated open water and upland habitats is expected to create habitat for sensitive species and improve ecosystem functions such as primary productivity and nutrient transport.

Key Dates:
- Final EIR by March 2010
- Final Conceptual Design and 80% of engineering drawings in process
- Importation of fill to begin summer 2010; completion by 2012
- Breach expected in 2013

6. Water Quality Investigations and Implementation

A. Complete Strategy for Comprehensive Delta Monitoring Program

Many agencies and groups monitor water quality, water flows, and ecological conditions in the Bay-Delta, but there is no comprehensive contaminants monitoring and assessment program. A system is needed for coordinating among monitoring programs and integrating contaminants monitoring into existing monitoring efforts whereby all data is synthesized and assessed on a regular basis.

Key Dates:
- A draft strategy and alternatives report will be released by the end of 2010

B. Evaluate effects of Ammonia on species of concern in the Delta

Studies suggest that delta smelt may be particularly sensitive to ammonia and that ammonia may limit primary productivity in the Delta. Definitive, controlled laboratory experiments must be conducted to determine the importance of these potential impacts.

Key Dates:

- Final report on delta smelt ammonia toxicity in January 2010
- Draft final report on effect of ammonia on primary productivity in February 2010
- Report on recommended additional ammonia actions by December 2010
- Report on ambient ammonia and nutrient monitoring in the Delta by Fall 2010

C. Develop better understanding of Blue-Green Algae Effects in the Delta and Throughout the State

Human health, biological, and ecological risks associated with BGA blooms statewide, including the Delta must be identified, and appropriate actions must be taken to control for BGA blooms in the Delta and other areas.

Key Dates:

- Final Report on Blue Green Algae Assessment will be completed mid-2010
- Development of a prototype identification guide for common cyanobacteria is on-going

D. Continue Central Valley Salinity Alternatives for Long-Term Sustainability Effort

The Water Boards have initiated a comprehensive effort to address salinity problems in the Central Valley and adopt long-term solutions that will lead to enhanced water quality and economic sustainability referred to as CV-SALTS.

Key Dates:

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E. Complete Sediment Quality Objectives for Enclosed Bays and Estuaries

Sediment Quality Objectives (SQOs) for the Delta and other estuaries and enclosed bays of California have been developed that include scientifically robust indicators to protect: sediment dwelling organisms from direct exposure to toxic pollutants in sediments; and human health from contaminants in fish tissue that bioaccumulate from the sediment into the food web. This action will develop a complete suite of tools and a framework to assess sediment quality, and an implementation policy that encourages controls on pollutants before they reach surface waters.

Key Dates:
- CEQA workshops for Phase II objectives will be held in 2010
- Draft staff report will be circulated in June 2010
- SWRCB Hearing for adoption of Phase II SQOs will be held in 2011
- Rule-making file will be submitted to Office of Administrative Law in 2011

F. Complete Once-Through Cooling Policy for Power Plants

On June 30, 2009, the State Water Board released a Draft Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling and held a public hearing on September 16, 2009, to receive comments on the Policy. In addition, on August 15, 2009, the State Water Board released a Draft Substitute Environmental Document for Proposed Policy for Power Plant Cooling.

Key Dates:
- The final draft policy proposed for the State Water Board's consideration is scheduled for February 2010; the policy will become effective in March 2010

G. Develop Whole Effluent Toxicity Standards

Whole effluent toxicity (WET) testing is an essential component of an integrated approach to water quality-based toxics control. WET provides a means of determining the aggregate effects of discharge constituents on indigenous aquatic biota,

Key Dates: Whole Effluent Toxicity Standards will be adopted by December 2010.

H. Complete Drinking Water Policy for the Central Valley

Surface waters of the Bay-Delta and upstream watersheds provide a portion of the drinking water supply for more than 65 percent of California's population. Impairment of these waters poses treatment challenges and public health concerns for people who drink the water. The Water Boards' Water Quality Control Plans include objectives for many constituents that threaten drinking water sources. Some constituents, however, are not addressed-- specifically pathogens, organic carbon, bromide, and nutrients. The Central Valley Regional Water Board is currently developing a drinking water policy to address these issues.

Key Dates:
Central Valley Regional Board will consider adoption of policy in mid 2010

I. Characterize Discharges from Bay Delta Islands, Complete and Implement Delta Pesticide Regulations, and Continue Agency Cooperation on In-Delta Pesticide Use

A new methodology for deriving freshwater water quality criteria for the protection of aquatic life was developed by the University of California, Davis for several pesticides of particular concern in the Sacramento River and San Joaquin River watersheds. The Central Valley Water Board has released draft water quality criteria for the insecticides bifenthrin, malathion, and diazinon, as well as water quality criteria for the herbicide diuron. In addition, a CEQA Scoping Meeting/Public Workshop was held on July 7, 2009 for the Central Valley Organochlorine Pesticide TMDL.

Study of sources, seasonality, and toxicity of pyrethroid pesticides in the Sacramento-San Joaquin River Delta is also continuing. Information from this study will be used to develop a monitoring plan to further characterize delta island discharges and assess the potential impacts of island discharges on beneficial uses in the Delta.

The Water Board will coordinate with Department of Pesticide Regulations, County Agricultural Commissioners, Department of Food and Agriculture, and Water Quality Coalitions to assess need for increased enforcement or restrictions on pesticide use in the Delta to ensure pesticide use does not impair aquatic life beneficial uses in the Delta and determine whether and what additional information is needed to evaluate the need for increased measures to control pesticide levels in the Delta.

Discharges from Delta islands are a very large, uncharacterized, potential source of pesticides and other contaminants to Delta waterways. Flow and water quality monitoring is needed to identify and quantify potential sources of toxicity or other impacts on Delta beneficial uses. These data also are needed to improve and calibrate models for characterizing current conditions and for evaluating and planning future Delta conveyance alternatives. There is a need to better understand the quantity, timing, location, and quality of discharges from Delta islands.

Key Dates:

- Water quality criteria documents for diaizon, malathion, diuron, bifenthrion, lambda-cyaholothrion and cyfluthirn will be completed by April 2010
- Final report with data and recommendations on in-Delta discharges by December 2010
- OTHER KEY DATE for agency cooperation?

J. Complete North San Francisco Bay Selenium TMDL and Selenium Screening Study for the Delta

Bioaccumulation of selenium in diving ducks has led to health advisories for local hunters. Monitoring of selenium in ducks, fish, and invertebrates in the northern part of the Bay and Delta has revealed levels that could cause health risks to people and wildlife.

Previously collected largemouth bass samples were re-analyzed for selenium to: 1) determine if there are aquatic life impairments in the Delta upstream of Suisun Bay from selenium, 2) collect baseline selenium information to evaluate possible redirected effects of future changes in Delta water management and, 3) identify potential sources of bioavailable selenium to the Delta and northern San Francisco Bay from the Central Valley.

Key Dates:

- A draft technical TMDL report will be released in 2010, pending additional analysis; the final technical TMDL report will follow in 2011
- a draft final report on bioaccumulation of selenium will be completed by May 2010

K. Update and Implement San Joaquin River Salt and Boron TMDL

A TMDL that addresses the reach of the San Joaquin River between the Stanislaus River confluence and Vernalis was approved by the State Water Board in February 2007. The US Bureau of Reclamation released a Draft Compliance Monitoring and Compliance Evaluation Plan in July, 2009, and held four meetings in July and August to solicit input from stakeholders including CV-SALTS. The final plan was expected to be ready by the end of December 2009. The Central Valley Regional Water Board is currently developing a TMDL for the San Joaquin River upstream of Vernalis.

Key Dates:

- USBR's will complete a draft compliance monitoring report in January 2010; a final report will be completed by July 2010
- A report will on Salt Tolerance of Crops in the Lower San Joaquin River (Stanislaus to Merced River reaches) will be released in late Winter 2010

L. Complete the Review and Update of the Southern Delta Salinity Objectives

(see "Complete Review and Update of the San Joaquin River Flow Objectives and Southern Delta Salinity Objectives" under Flow and Water Use Investigations and Implementation Section 7)

7. Flow and Water Use Investigations and Implementation

A. Complete Review and Update of the San Joaquin River Flow and Southern Delta Salinity Objectives

The southern Delta salinity and San Joaquin River flow objectives and the implementation of those objectives may not be appropriate. Revised objectives and implementation may benefit San Joaquin Basin salmonids, pelagic organisms and other species; and may improve San Joaquin River water quality (salinity, DO, and other constituents).

Key Dates:

- Report on salt and fish flow science by April 2010
- Final Bay-Delta Plan update for San Joaquin River flow and southern delta salinity by December 2010

B. Develop Flow Criteria for the Delta

In August, 2009 the State Water Board completed its periodic review of the 2006 Bay-Delta Plan. The Periodic Review recommended, among other things, that the State Water Board consider changes to the Delta outflow objective, or alternatively Delta inflow from the Sacramento Basin, based on available information as part of its review and possible revision of the Bay-Delta Plan. The Delta outflow objective is intended to protect estuarine habitat for anadromous fish and other estuarine dependent species. Delta outflows affect migration patterns of both estuarine and anadromous species and the availability of habitat (State Water Board 1999). Freshwater flow is an important cue for upstream migration of adult salmon and is a factor in the survival of smolts moving downstream through the Delta. The populations of several estuarine-dependent species of fish and shrimp vary positively with flow as do other measures of the health of the estuarine ecosystem (Kimmerer 2004). Freshwater inflow also has chemical and biological consequences through its effects on loading of nutrients and organic matter, pollutant concentrations, and residence time. In December, 2009 the State Water Board noticed a proceeding to develop new flow criteria for the Sacramento-San Joaquin Delta ecosystem necessary to protect public trust resources pursuant to the Board's public trust obligations in compliance with Senate Bill No. 1 of the 2009-2010 Seventh Extraordinary Session.

Key Dates:

- Develop Delta flow criteria by August 2010
- SWRCB submits Delta flow criteria to the Delta Stewardship Council for its information by September 2010

C. Investigate and Take Enforcement Against Illegal Diversions in the Delta

Increasing demands on water from the Bay-Delta and its tributaries, the effects of climate change, and mounting environmental concerns have intensified the need for the State Water Board to vigorously enforce water right requirements to ensure that sufficient flows are available to meet water quality objectives and to prevent DWR's, USBR's, and other water right holders' developed water supplies from being adversely affected by unauthorized diversions. The identification and curtailment of unauthorized diversions will contribute to the protection of beneficial uses in the Bay-Delta watershed, and will ensure the efficient allocation of water resources. These benefits are not limited to the Bay-Delta because vigorous enforcement will serve as a deterrent to other illegal users of water throughout the State and will benefit water supply contractors north and south of the Delta by protecting DWR's and USBR's developed water supplies.

Key Dates:

- Commence hearings on delta diversion cease and desist orders in April, 2010
- Continue Delta water right investigations through 2010

C. Develop Schedule and Cost Estimates for completing in-stream flow studies for the Delta and other streams

SBX7 1 requires the Water Boards to submit to the Legislature by December 31, 2010 a prioritized schedule and estimate of costs to complete instream flow studies for the Delta and for high priority rivers and streams in the Delta watershed by 2012, and for all major rivers and streams outside the Sacramento River watershed by 2018. This effort will be coordinated with DFG's development of recommendations for instream flow needs in the Delta.

Key Dates:

- A report with prioritized schedule and estimate of costs to complete instream flow studies for the Delta and for high priority rivers will be completed and submitted to the Legislature in December 2010

D. Develop procedures for a Delta Watermaster

SBX7 1 requires the State Water Board to appoint a Delta Watermaster as an enforcement officer for the State Water Board in the Delta, and to develop procedures governing the Delta Watermaster's activities.

Key Dates:

- Watermaster procedures will be developed by December 2010